

SuperDuct

*Another EST
Innovation!*



The Challenge

- **Create new product to replace “red box”**
 - **Built-in accessories**
 - **Innovative features**

Three Models

- 1. 4-wire (HVAC)**
- 2. Signature (intelligent-addressable)**
- 3. 2-wire (conventional)**

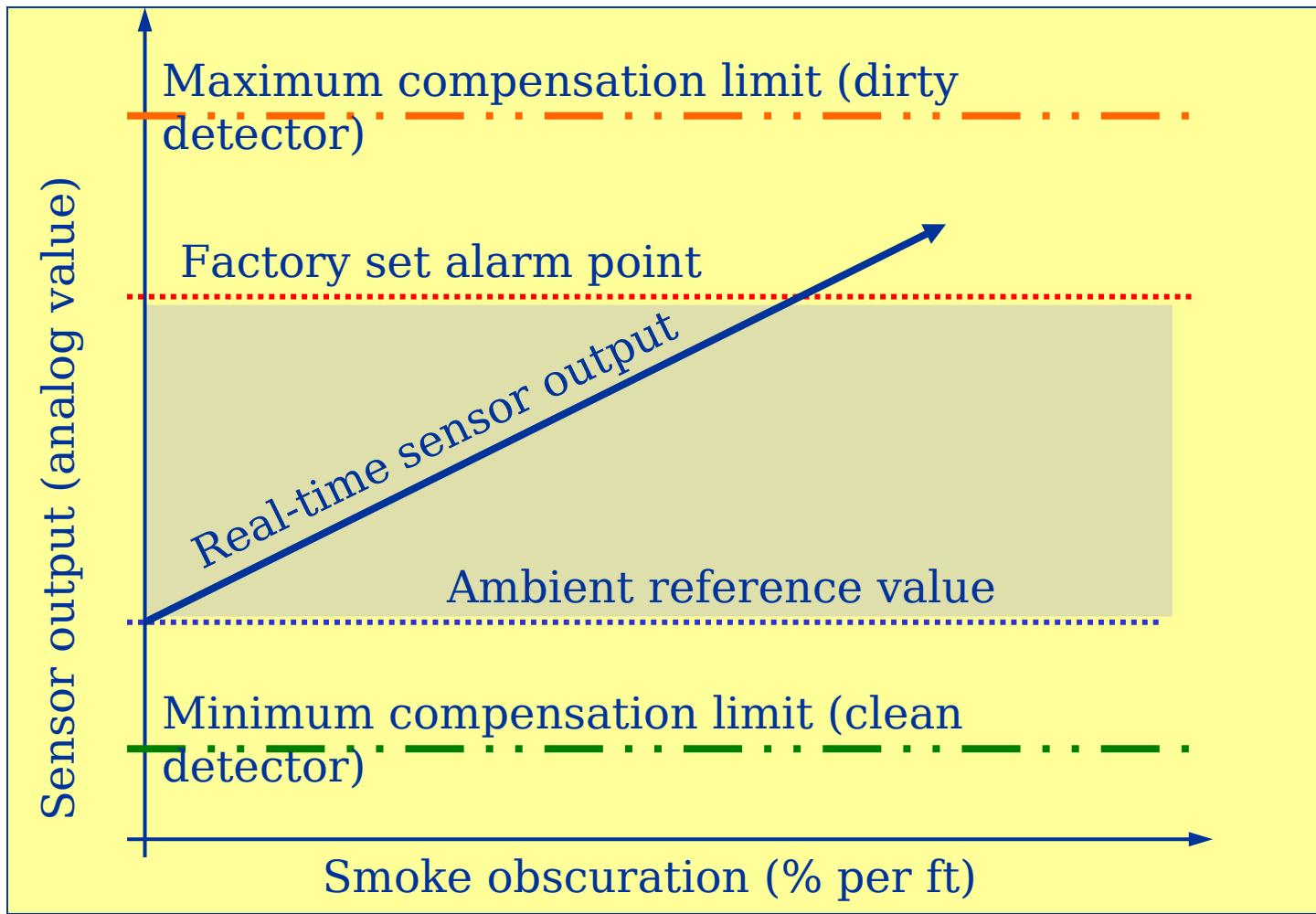
Innovation

- **EST 'Signature' based design**
 - **PCB mounted photoelectric sensor with on-board intelligence**
 - **Environmental compensation with differential sensing is reliable and stable**
 - **The alarm decision made by Signature detector is based on changing environmental conditions – not a fixed alarm threshold**
- **Detector sensitivity never drifts!**

Reliability

- **Environmental compensation timeline**
 - Every 2 seconds sensor values are read and compared to the reference value. The detector decides whether there is an alarm condition present.
 - Every 8 minutes the reference value is updated based upon the current ambient environmental condition.
 - Every 60 minutes the detector stores the environmental data in its memory.
- **No false alarms**

Stability



Lowest Cost

- **Reduced maintenance cost**
 - Sensitivity tester not required
 - Removable parts for easy cleaning
 - Built-in air flow sensor signals clogged filters (future)
- **32 trouble/diagnostic codes**
 - Provides solutions for problem installations

4-wire Features

- **Less than 2" deep**
- **-20°F to 158°F operating range**
- **System Sensor 'drop-in'**



4-wire Features

- **Separate controller and sensors**
 - 1 controller for up to 2 sensors
 - Remote or attached to controller
- **Supervised RJ45 connection**



4-wire Controller

- **24 Vac/Vdc, 120/230Vac**
- **Status LEDs**
 - **Power, Alarm, Trouble**
 - **Visible through clear cover**
- **Test/Reset switch**
- **2A alarm contact**
- **2A trouble contact**
- **2 x 10A auxiliary contacts**



4-wire Sensor

- **Status LEDs**
 - Power, Alarm, Dirty, Trouble
 - Visible through clear cover
- **Cover tamper reed switch**
- **Tubes install from room-side or air-side**
- **Magnet activated Test/Dirty switch**
 - >4 sec = alarm
 - 1-4 sec = dirty level



Signature Sensor

- **Status LEDs**
 - Communication, Alarm
 - Visible through clear cover
- **Magnet activated Test switch**
 - >4 sec = alarm
- **Cover tamper reed switch**
- **Tubes install from room-side or air-side**
- **Terminal connect**
- **2A Form C contact (like relay base)**



Conventional Sensor

- **Status LEDs**
 - **Alarm, Trouble, Dirty**
 - **Visible through clear cover**
- **Cover tamper reed switch**
- **Terminal connect**
- **Tubes install from room-side or air-side**
- **Magnet activated Test/Dirty switch**
 - **>4 sec = alarm**
 - **1-4 sec = dirty level**
- **2A Form C contact**



HVAC Options & Accessories

- **Air sampling tubes: 1.5, 3, 5, 10 ft**
- **Flexible tube adapters: 5, 10, 15 ft**
- **RJ45 harnesses: 1, 5, 10, 15 ft**
- **Duct mounting adapter for sampling tube**
- **Remote Alarm LED**
- **Remote magnetic Test/Reset station**
- **Air velocity test kit**
- **CO2 sensor (future)**



Thank You!

